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ABSTRACT

The purpose of this study was to design a distributive system that complies with the priorities of the federal Vocational Education Act; meets the vocational education needs of students, local education agenices (LEAs), and the state (California); and is both equitable and practical to implement. Data were gathered by literature reviews, state-level administrator interviews, LEA interviews and survey, and a national survey. This Executive Summary highlights the Study Report, which was presented in two volumes. It reviews the procedures used in California and eight other states to distribute federal funds for vocational education; discusses the procedures currently used to select new programs for VEA support; analyzes the degree to which these procedures are meeting the needs of LEAs in the two systems; discusses and analyzes high cost technical programs; and presents the recommended system for distributing federal vocational education funds between the State Department of Education and the California Community Colleges. It also presents a discussion of the major issues involved in developing a distribution system, which include (1) the definition and calculation of a comparable measure of program size; (2) the identification and calculation of comparable measures of program cost; (3) the development of an appropriate formula for distributing the funds between the two agencies; (4) the availability of reliable data on disadvantaged and handicapped enrollments in vocational education programs; and (5) the determination of relative financial ability and the advisability of its inclusion in the formula. (KC)

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ED211672

FINAL REPORT

Title of Project:	The Distribution of Federal Vocational Education Funds Study
Agency:	Evaluation and Training Institute
Project Director:	Dr. Clare Rose
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Beginning Date:	September 27, 1980
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GOALS AND OBJECTIVES

Purpose of the Distribution Study. The purpose of the proposed study was to design a system for distributing vocational education funds between secondary and community college levels and among individual LEAs and other eligible recipients that complies with the requirements of P.L. 94-482, and is both equitable and practical to implement. Within the context of this overall goal the objectives of the study are grouped by project Phase, with subobjectives as follows:

PHASE I

A. To identify the priorities and mandates of the Act and subsequent amendments in connection with the distribution of funds at the state level.

A.1 To review the Act, amendments, existing reports, position papers, studies, correspondence with the Office of Education, and other documents relating to the priorities and mandates of the distribution of funds.

A.2 To gather information about both the current and historical distribution systems and allocation formulas used in California for each subpart of the Act.

A.3 To gather information about the distribution systems currently used in other states, particularly in states considered exemplary by the Office of Education.

A.4 To prepare a synthesis and summary of all studies and other information gathered through written materials and interviews.

A.5 To identify needs of vocational education programs in California that can be met with VEA funds.

A.6. To identify alternative methods of distributing VEA funds between the secondary and community college levels.

A.7 To identify alternative methods of distributing funds that meet the mandates and priorities of the Act.

A.8 To identify the differences and similarities between the various eligible recipients of vocational education funds.

A.9 To compare the distribution methods used in comparable states to the distribution system in use in California

B. To submit 70 copies of a Comparative Report on Methods Used in California and Eight Other States to Distribute Vocational Education Funds and the Effect of the Methods on Meeting Needs.

F. Prepare and submit 70 copies of a report on Recommended Distribution System for Vocational Education Funds and its Effect.

PHASE III

G. To identify effective methods of encouraging implementation of high cost technical-type programs.

G.1 Develop definitions of high cost technical-type programs.

G.2 Develop listing of USOE codes and titles for "high cost technical-type programs."

G.3 Identify definitions used and tabulate numbers of high cost technical-type programs offered in four comparison states.

G.4 Identify number of high cost technical programs offered in California by type, during the most recent year in which data are available.

G.5 Identify number of high cost technical-type programs implemented in the last three years.

G.6 Identify high cost technical programs that are most appropriately offered at only one level, either secondary or postsecondary.

H. Prepare and submit 70 copies of An Analysis of Modifications of Vocational Education Fund Distributions fo Encourage High Cost Technical-Type Programs.

PHASE IV

I. To identify effective methods of encouraging implementation of vocational programs directed toward new and emerging occupations.

I.1 To identify definitional problems in classifying occupations as new or emerging.

I.2 To identify and summarize characteristics of programs LEAs believe are directed toward new and/or emerging occupations, including costs of starting programs and maintenance costs.

I.3 Develop definitions and/or descriptions of the elements of a program that could lead to it being classified as one that meets new and emerging manpower needs and job opportunities.

J. Prepare and submit 70 copies of An Analysis of Modifications of Vocational Education Fund Distributions to Encourage Programs for New or Emerging Occupations..

K. Prepare and submit 500 copies of an Executive Summary of overall project findings, and prepare and submit 10 copies of a final project report.

Objectives, Outcomes and Activities

Discussions of the project objectives, anticipated outcomes, actual outcomes and activities are contained in the two volume Study Report which was previously submitted and the Executive Summary included in this report. Dissemination activities include providing the State Department of Education with 70 copies of the Study Report, 500 copies of the Executive Summary, oral presentations to the Joint Staff Council and Joint Policy Council.

Outcomes included the development of the Distribution System and four major project reports: the Eight-State Report, New Program Report, High Cost Technical Report and the Distribution Study Report presented in Volume I. Technical material for all reports is included in Volume II. A summary of abstracts is presented in Volume III.

There were no differences between anticipated and actual outcomes.

No follow-up activities have been set except for the December 16 meeting with the Joint Policy Council.

Internal Evaluation

Internal evaluation of the project was on-going and included the submission of monthly progress reports, monthly meetings with the study Steering Committee, meetings with the Advisory Committee and numerous in-person and telephone contacts with the project monitor. ETI's in-house monitoring procedures were also used throughout the study, in which a detailed weekly timeline was developed for the project and progress toward objectives and deadlines for the completion of sub-tasks were reviewed by the senior research staff of the Institute during bi-weekly meetings.

EXECUTIVE SUMMARY

The purpose of the Distribution of Federal Vocational Education Funds study was to design a distribution system which complies with the priorities of the federal Vocational Education Act, meets the vocational education needs of students, local education agencies (LEAs), and the state, and is both equitable and practical to implement. Six major objectives were defined for the study:

1. To identify the priorities and mandates of the Act and subsequent amendments;

2. To delineate data elements that should be included in the distribution system to encompass all of the restricted features and priorities of each subpart of the Act;

3. To develop a recommended system for distributing federal vocational education funds under all subparts of the Act between the secondary and community college levels and among the individual LEAs and other eligible recipients;

4. To identify effective methods of encouraging implementation of vocational programs for new and emerging occupations;

5. To identify effective methods of encouraging implementation of high cost technical programs; and

6. To provide implementation strategies to effect an orderly and equitable conversion from existing distribution methods to the recommended system.

To meet these objectives, four major project activities were conducted:

1) Review of the Literature. The ETI study team reviewed the Vocational Amendments of 1968, Title II of the Education Amendments of 1976, and all subsequent amendments, regulations and interpretations. The California Five-Year Plan for Vocational Education, the Annual Accountability Reports and all studies of the California distribution system were reviewed to obtain a detailed understanding of the distribution and allocation systems for each subpart of the Act.

A literature search was also conducted through the ERIC Clearinghouses on Vocational Education, Higher Education, Community Colleges and Secondary Schools, and reports and studies were collected from state staff and Advisory Committee members. Abstracts of all materials were prepared according to a standard format, and are presented in a separate volume which is available as a resource in the State Department of Education and Chancellor's Office, California Community Colleges.

2) State-level Administrator Interviews. The ETI study team conducted on-site interviews with administrators and staff from the State Department

of Education and the Chancellor's Office of the California Community Colleges. Interviews were also held with all persons who had served on allocation committees for vocational funds and the authors of other fund distribution studies conducted in California. The purpose of these interviews was to review the historical problems associated with the various allocation formulas in order to identify potential problems and elements that should be included as factors in a new distribution system.

3) LEA Interviews and Survey. Interviews were conducted with LEA staff in a stratified sample of 20 secondary and 10 community college districts across California. The purpose of these interviews was to gather information about the needs of LEAs, high cost technical programs, and programs for new and emerging occupations. Three surveys were also mailed to separate random samples of 100 secondary districts, 20 community college districts, and 20 ROC/Ps across the state. The surveys provided further information about LEA needs, high cost technical programs, and programs for new and emerging occupations, respectively.

4) National Survey. To provide a base of information about the distribution systems used in other states, the State Director of Vocational Education in California, Mr. Sam Barrett, wrote a letter to all State Directors of Vocational Education. This letter explained the goals of the study, requested information, and enlisted the cooperation of the states chosen for the comparison report stipulated in the RFP for the project. Responses were received from 48 states and the review of their state plans provided the information base for the selection of the eight case study states.

Telephone interviews were also conducted with secondary and postsecondary LEA personnel in the study states to obtain additional information on the needs of LEAs in those states, high cost technical programs, and programs for new and emerging occupations.

An Advisory Committee consisting of representatives from LEAs, (including the University of California and a County Office of Education) the State Department of Education (SDE) and the Chancellor's Office, California Community Colleges was chosen in consultation with the Joint Staff Council, which is composed of vocational education staff from both agencies. The Advisory Committee members reviewed the design of the study, interview schedules, selections of sample states and LEAs, and preliminary findings and recommendations, as well as identified key people within local, state and federal agencies to be interviewed.

The study report is presented in two volumes. Volume I, the Distribution of Federal Vocational Education Funds Study Report, reviews the procedures used in California and eight other states to distribute federal funds for vocational education, discusses the procedures currently used to select new programs for VEA support and analyzes the degree to which these procedures are meeting the needs of LEAs in the two systems, discusses and analyzes high cost technical programs, and presents the recommended system for distributing federal vocational education funds between the State Department of Education and the California Community Colleges. This volume also presents a discussion of the major issues involved in developing a distribution system, which include: 1) The

definition and calculation of a comparable measure of program size; 2) the identification and calculation of comparable measures of program cost; 3) the development of an appropriate formula for distributing the funds between the two agencies; 4) the availability of reliable data on disadvantaged and handicapped enrollments in vocational education programs; and 5) the determination of relative financial ability and the advisability of its inclusion in the formula.

Volume II is the Technical Report and contains Appendices which correspond to the four parts of the study presented in Volume I. All technical material is contained in this volume, including tables and detailed descriptions of the eight study states, questionnaires used in the LEA and out-of-state interviews, and results of the computer simulations.

RECOMMENDED DISTRIBUTION SYSTEM

Formula-Based vs. Priority-Based Distribution Systems.

In considering various alternatives for dividing VEA funds between secondary and postsecondary programs, it is important to distinguish between two general approaches, formula-based and priority-based. By formula-based, we mean a procedure for dividing funds according to a specified mathematical formula that uses variables that can be precisely measured and quantified. By priority-based, we mean a more subjective procedure by which annual or longer range priorities are established for vocational education and the use of federal funds.

Either the formula-based or priority-based approach complies with federal law, and each has advantages and disadvantages. A formula-based approach, once established, has the advantage of being relatively predictable and stable, and it may easily be audited. On the other hand, because of its mathematical properties, it is limited to variables that are quantifiable. A priority-based approach has the advantage of more flexibility, it can incorporate qualitative information, and it lends itself better to supporting creative and novel projects. On the other hand, unless clear consensus is achieved on the priorities, this approach tends to encourage inter-agency disagreements that are wasteful and unproductive. Therefore:

1. Until such time as California adopts a clear policy and priorities for vocational education and the use of VEA funds, we recommend that a formula-based approach be used to divide VEA funds between secondary and postsecondary programs.

Possible Criteria for Dividing VEA Funds Between Secondary and Postsecondary Programs

Except for requiring that a minimum of 15 percent of the VEA Basic grant be allocated to postsecondary and adult programs, federal law and regulations offer no directions as to the division of funds between secondary and postsecondary programs. This study examined six possible criteria that could be used to divide funds between the two systems.

1. Program Size. The division of funds could easily be based wholly or in part on the relative size of the two systems' vocational education programs.

2. Program Costs. The division of funds may also take into account differences in cost per student between secondary and postsecondary programs.

3. Resource Differences. While the federal legislation clearly refers to the relative financial ability of LEAs, rather than the statewide secondary and postsecondary systems as a whole, it can be argued that this factor should be considered in the division of funds between systems.

4. Concentration of Target Populations. The division of funds under Subpart 4 and the disadvantaged and handicapped setasides for Subparts 2 and 3 should reflect any differences between secondary and postsecondary levels in concentrations of disadvantaged and handicapped students.

5. Program Demand. Funds could be divided so that programs for which there is a high student demand receive funding while those that are undersubscribed do not.

6. Unmet Needs. The division could be based on policy decisions to target funds to meet critical needs at either the secondary or postsecondary level.

Availability of Data. At the present time, reasonably accurate, reliable data are available for secondary and postsecondary program size (vocational average daily attendance, VADA), program costs, and systemwide expenditures and revenues. Both size and cost of program may be considered by two-digit area as defined in the USOE codes -- agriculture, distributive education, health, etc. Accurate, comparable data on handicapped and disadvantaged VADA are not presently available. Therefore:

2. Until the State Department of Education and the Chancellor's Office collect accurate data on handicapped and disadvantaged VADA, the division of setaside funds and funds allocated under Subpart 4 must be based on total program size rather than relative concentration of special populations.

Needs of Local Education Agencies (LEAs).

At this point, any attempt to incorporate the needs of LEAs into a formula-based division of funds between secondary and postsecondary programs would be spurious. As discussed in Chapter 2 of Volume I, one of the main criteria in a formula based system is that the data represent an objective measurement. Inclusion of LEA needs in the division of funds between secondary and postsecondary programs would require a subjective comparison of the relative importance of qualitative needs. Such comparisons are a matter of policy, not of empirical decisions. Therefore, it is recommended that:

3. Qualitative indicators of the needs of secondary and postsecondary LEAs should not be incorporated into the proposed formula-based system for dividing VEA funds between the State Department of Education and the Chancellor's Office.

In the survey and interviews with secondary and postsecondary LEA staff in California and in the other states, the most frequently mentioned need was for more money. Under this general category, there were several priorities identified in meeting both program and ancillary needs, which were:

Both secondary and postsecondary LEAs felt most strongly about their need for money to purchase new or replacement equipment, lease equipment, or repair existing equipment.

A need mentioned by two-thirds of the secondary respondents was the need for assistance with methods to utilize the allocation provided for programs and services for disadvantaged and handicapped students.

The third most frequently mentioned need was for in-service training to provide vocational instructors with training and experience regarding current methods and techniques being used in business, industry, agriculture and government.

About half of the secondary interviewees and many survey respondents from both secondary and postsecondary districts expressed concern about the small amount of VEA funds that could be used for administrative costs relative to the enormous amount of time required to account for the funds.

Many secondary interviewees and survey respondents indicated they were more in need of VEA funds to maintain existing programs than to start new programs.

About a third of the survey respondents at both secondary and community college districts mentioned a need for funds to hire more vocational teachers.

The following recommendations are based on the findings from the LEA needs interviews and surveys:

4. The State Department of Education and the Chancellor's Office of the California Community Colleges should establish an on-going, yearly method of determining the needs and priorities of the LEAs in its jurisdiction.

5. The State Department of Education should collect data on the number of secondary vocational students who do not go on to further vocational training. These figures will assist in a determination of relative student need for vocational training.

6. The State Department of Education and the Chancellor's Office should continue to identify and utilize resources to provide a state-level match for VEA Subparts 2 and 3 Disadvantaged and Handicapped Funds.

7. The State Department of Education and the Chancellor's Office should conduct annual workshops for all vocational directors/deans and their business managers to acquaint them with proper accounting procedures for federal and non-federal funds.

8. The State Department of Education and the Chancellor's Office should consider, as a priority, assisting smaller districts within their respective jurisdictions in providing occupational up-grading for vocational instructors.

9. The State Department of Education and the Chancellor's Office should shorten and simplify the required VEA application forms for those districts receiving the minimum allocation.

Formula Based Approaches to Dividing VEA Funds

Three models were examined for determining the division of funds between secondary and postsecondary programs in California. Model I, the simplest of the three, divides the funds based on relative enrollments in vocational education. It makes very little adjustment for differences in costs, and it does not distinguish among enrollments in different types of programs. Model II greatly refines Model I, and divides money based on the relative size of secondary and postsecondary enrollments, weighted to reflect differences in costs among major program areas. While both Model I and II rely strictly on aggregate state data, Model III determines the division of funds between the two levels by calculating the distribution directly to LEAs. Model III allocates funds to "level up" the neediest LEAs bringing the poorest up to the level of the second poorest, these two up to the level of the third, these three up to the level of the fourth, and so on until funds are exhausted.

For Models I and II, several different outcomes were simulated, varying key assumptions about what variables to include in the model and what weights these variables were given. Because existing data are too unreliable it was agreed that Model III should not simulated.

Comparable Measures of Program Size. Any attempt to design a distribution system that allocates a "fair" share of VEA funds to each eligible recipient must be based, in part, on the size of the recipient's vocational program. A common unit of 525 student contact hours per semester, called "equalized average daily attendance" (EADA) was employed in the model simulations, and we recommend that:

10. All state agencies receiving VEA funds should adopt EADA, measured in units of 525 student contact hours, as the common measure of size of vocational education programs.

Computation of Cost Factors. At the present, for all vocational programs except those in ROC/Ps, SDE reports direct expenditures by object (e.g., teacher's salaries, counselor salaries, benefits, textbooks, instructional materials and supplies, etc.). For ROC/Ps, only figures for total direct expenditures are available, and these are not reported by

object. The Chancellor's Office reports direct expenditures by object for all of its vocational programs.

The inability to include ROC/P expenditures in each line item makes it difficult to compare expenditures per EADA between the two agencies for any line item other than total direct costs. Futhermore, SDE and CCC do not presently employ similar procedures for calculating indirect costs. SDE distinguishes between "direct support charges" and "indirect costs," while CCC considers only the latter. CCC also includes items in indirect costs that SDE excludes. Thus the total expenditures per EADA for the two agencies are not comparable. Since neither agency has an adequate system for verifying cost figures or accounting procedures used by LEAs, and the reliability of the cost data is also questionable, we recommend that:

11. The State Department of Education and the Chancellor's Office should take steps to adopt comparable accounting systems, as well as procedures for verifying data submitted by LEAs.

Resource Differences. For simulations involving adjustments for resource differences, we used estimates of the general education apportionments for both the secondary and postsecondary levels and calculated a figure for resources per EADA for both segments. Using these estimates of resources per EADA, simulations were run adjusting for both differences in costs and for differences in resources. The adjustment may be made by weighting postsecondary EADA by the following factor:

$$\frac{\text{postsecondary costs per EADA/secondary costs per EADA}}{\text{postsecondary resources per EADA/secondary resources per EADA}}$$

We have serious reservations about employing this procedure. The intent of the federal law is to compensate for inequitable differences in relative financial ability. There are many instances, however, of equitable differences in resources. For example, where it costs more to educate a particular type of student or to provide for a particular kind of program, adjusting for resource differences would simply deny those high cost programs the resources they so clearly need. Thus, although it is clear that there are differences in costs and resources per EADA between secondary and postsecondary programs, it is not as clear that these differences are inequitable. Moreover, given the high level of state funding for both levels, to the extent that such inequalities are judged inequitable, the problem is more appropriately a matter for the Legislature to resolve, rather than an issue for the division of VEA funds. Therefore, we recommended that:

12. It is not appropriate at this time to include resource differences in the division of funds. If the two agencies wish to include this factor in the future, they should take steps to determine what resources may properly be counted and what differences constitute true inequities.

Alternative Distribution Systems

Model I: Division on the Basis of Total EADA. Simulations of Model I relied on EADA data that averaged figures for FY 1978 and FY 1979. Two

major options were considered. Option One divided funds simply on the basis of relative shares of EADA. Option Two weighted EADA to reflect the relative cost per EADA of vocational education at each level. For each of these two options, three different assumptions were made regarding the appropriate enrollment base for determining the division of Subpart 2 and 3 funds. Assumption 1 uses as an enrollment base total enrollments, including non-occupational consumer and homemaking and industrial arts. Assumption 2 excludes non-occupational consumer and homemaking. Assumption 3 excludes both non-occupational consumer and homemaking and industrial arts.

The proper treatment of EADA in industrial arts is a controversial issue. While federal law explicitly permits funding industrial arts, it does not require funding, and the decision to fund industrial arts under VEA is strictly a matter of state policy. We believe that industrial arts is a legitimate vocational education program, and therefore recommend that:

13. Approved industrial arts EADA should be counted in the divisions of VEA funds (Assumption 2), until such time that the state explicitly excludes such programs from eligibility.

Model II: Division Based on Ratios of Cost-Weighted EADA by Program. Model II first determines EADA in each vocational education program, and then weights EADA by cost per EADA in each program. However, adequate data are not presently available to adopt this model. Although SDE maintains information on VADA by two-digit program code, converting these data to EADA was beyond the scope of this study. Furthermore, available data from both agencies on costs by program area are even less reliable than the data used in Model I. As a future approach, however, Model II offers some distinct advantages over Model I, in that it does not penalize efforts to expand high cost programs. We recommend that:

14. The State Department of Education and the Chancellor's Office should undertake efforts to maintain comparable data on EADA and expenditures by program area, and consider adopting Model II when such data become available.

Model III: Leveling Up. Model III allocates VEA funds directly to eligible recipients based on relative financial ability per unit of weighted EADA. In its general form, the model proceeds in three steps: 1) Each recipient's weighted enrollment is calculated; 2) relative financial ability per unit of weighted EADA is determined and participants ranked; and, 3) resources are leveled up. Model III was not simulated since staff of both agencies felt that, given the unreliability of the data and the complexity of the model, the approach was not appropriate at this time.

Summary of Models. In our judgment, Option Two of Models I and II strikes the best balance between simplicity, precise differentiation, and cost of implementation. As a practical matter, however, cost data are not currently reliable enough or sufficiently comparable to use either of these approaches with confidence. Therefore, we recommend that:

15. Until such time as comparable and reliable data are available on costs, Option One of Model I, Assumption 2 (which excludes non-occupational consumer and homemaking EADA), is the most practical approach to dividing federal VEA funds between the State Department of Education and the Chancellor's Office.

The Division of Administrative Funds

One of the most sensitive issues in the Distribution Study concerns the division of administrative funds between the two agencies. Presently, funds for administration are used to support vocational education personnel in each agency plus operating expenses, consultant fees and equipment. For 1981-82, excluding the state match required for Subparts 2 and 3, the total amount for administration was approximately $3.4 million. SDE's portion of the 1981-82 administrative funds provided for 61 professional and technical personnel; the Chancellor's Office portion supported 19 professional and technical personnel.

There are three alternatives for distributing administrative funds between the two agencies. Alternative One is to maintain the status quo, continuing to remove administrative costs for both agencies from the federal grant and then distributing the balance based upon negotiated percentages for each subpart. Alternative Two would apply the system used for dividing VEA funds to the total federal grant and each agency would be responsible for its own administrative costs. Under this alternative, the Chancellor's Office would then contract back to SDE for the costs of SDE's services both as sole state agency and for work done on behalf of the Chancellor's Office. In Alternative Three, the costs for sole state agency functions and costs for administering the grant (estimated at 50 percent of the available administrative funds) would first be subtracted from the total federal grant. This amount would then be divided between the two agencies according to the proportion of districts served by each. Any balance remaining would be divided according to the recommended system for dividing VEA funds.

SDE supports Alternatives One and Three, maintaining that it must provide services and administer the federal grant for 382 districts with approximately 1800 schools compared to the Community Colleges' 70 districts and 107 colleges. Chancellor's Office staff support Alternative Two, maintaining that the current method of distributing administrative funds is inequitable. At present, no substantive evidence is available to support the viewpoint of either agency. In order to properly evaluate the three alternatives, we recommend that:

1. The State Department of Education and the Chancellor's Office should identify sole state agency functions and determine the cost of these activities and the amounts to be assessed each agency.

2. The State Department of Education and the Chancellor's Office should identify the types of services SDE provides on behalf of the Chancellor's Office and determine the costs associated with these activities.

3. The State Department of Education and the Chancellor's Office should conduct an in-depth analysis of functions and staff time so that the number of vocational staff and proportion of staff time required to serve LEAs can be justified, and adjustments in administrative costs made as appropriate.

Once recommendations 1, 2 and 3 have been implemented, we suggest that a compromise between Alternatives One and Two be adopted and recommend that:

4. The agreed upon costs of sole state agency functions and agreed upon adjustment for the additional districts served by the State Department of Education should be subtracted from the total federal grant. The balance of funds should then be divided on the basis of the recommended distribution system (Model I, Option One, Assumption 2) and the Chancellor's Office should reimburse the State Department of Education for costs of direct services provided on behalf of the community colleges.

If Model I, Option One, Assumption Two is adopted with the percentage basis applied to the total grant, the loss of VEA funds to SDE would be severe. The State Department of Education cannot absorb this large a reduction without a significant loss in personnel and a serious disruption in the agency. Nor could allocations to LEAs be sufficiently reduced to make up the loss without serious disruption to the districts. We suggest that the actual reduction imposed upon SDE be negotiated by the two agencies, keeping in mind the goals of the vocational program and the best interests of the vocational students served by SDE and CCC.

We also suggest that:

5. Whatever reduction is agreed upon, the transition should be made over a three to five year period so that the integrity and quality of the vocational program can be preserved and the least disruption occurs either in SDE's allocations to the LEAs or their staff.

In addition to the Distribution System report, three other reports were mandated in the RFP for the study. Summaries of these reports are presented in the following sections.

THE EIGHT STATE REPORT

To select a sample of eight states whose state plans, vocational education delivery systems and/or distribution methods were most comparable to California, all states were categorized according to three criteria: 1) The organizational structure of their designated State Board of Education for receiving federal VEA funds; 2) the comparability of their vocational education delivery system to California's system; and 3) the amount of federal VEA funds received by the state. The four site visit states chosen were Florida, Illinois, Ohio, and Washington. The four additional study states were Arizona, Colorado, Michigan and New Jersey.

Findings. The procedures used in the eight sample states to divide VEA funds between the secondary and postsecondary systems can be summarized into three general categories: 1) No formal division of funds is made between different delivery systems -- both postsecondary and secondary districts are considered simultaneously in distribution procedures and formulas; 2) a division of funds between the two systems is made prior to distributing funds to LEAs, but the division reflects a political process or legislative requirement rather than a systematic, mathematical procedure; and 3) a division of funds is made between the two levels prior to distributing funds to LEAs based upon vocational program enrollments and/or vocational program costs at each level.

Colorado, Florida, Ohio and Illinois did not have a formal division of funds between the secondary and postsecondary systems. There were, however, vast differences in their distribution procedures. In Colorado, all Subpart 2 funds are given to postsecondary institutions. Florida and Ohio distribute VEA funds directly to both secondary and postsecondary districts through formula allocation procedures. For Subpart 2, Illinois employs a procedure which generates a reimbursement figure per vocational student unit, credit hour or contact hour in both secondary and postsecondary programs. This figure varies by the program, level of course and institution. The Illinois system is particularly appealing because it incorporates data on program level, occupational manpower need and program costs, in addition to the criteria required by federal legislation.

An explicit agency-level split of federal funds for at least one subpart of the Act occurs in Michigan, New Jersey and Arizona before the distribution of monies is made to local districts within each level. The proportion allocated to each agency reflects a political decision or legislative requirement. In Michigan, the proportion of funding allocated to postsecondary vocational programs varies yearly from 16-19 percent based upon budget projections. In New Jersey and Arizona, a state level split of Subpart 2 funds is made under which the postsecondary/adult sector receives the required minimum setaside of 15 percent. A second split is then made between postsecondary and adult programs, with the allocations to each being determined by negotiated agreement.

Only Washington divides VEA funds between the secondary and postsecondary levels on the basis of the most recent year's vocational FTE enrollments. However, Washington follows the procedure used to distribute state funds and accepts the use of different definitions of vocational FTE for each level. An FTE is defined as 900 enrollment hours in approved vocational programs per year in high schools; 900 hours of actual contact time in vocational technical institutions; and 45 credit hours per year in community colleges.

Five alternative methods emerged from the study of other state distribution systems. These alternatives include: 1) Allocating all VEA funds to the postsecondary system; 2) allocating only the federally required 15 percent minimum setaside to the postsecondary system; 3) dividing funds on the basis of unadjusted vocational enrollments; 4) dividing funds on the basis of adjusted vocational enrollments or some measure of vocational attendance units; and 5) distributing funds directly to local districts with no agency level split of funds. Each of these

alternatives is explored in Volume I, Part IV.

NEW PROGRAMS REPORT

The purpose of this report was to identify effective methods of encouraging the implementation of vocational programs for new and emerging occupations.

In the eight other states studied, four incorporate a factor for new and emerging programs in their distribution formulas (Arizona, Colorado, New Jersey and Washington). Illinois uses an initial program factor for new courses, Florida and Ohio use a new program funding pool, and Michigan reports having neither a new program factor nor a funding pool. These states employ a wide range of definitions, from the inclusion of new courses within an existing program to a new program which does not exist anywhere else in the state. Criteria range from programs which have never been offered before to those which were only not offered in the previous year.

With the exception of Washington, new program funds are generally termed as "too insignificant in size" to influence LEA decisions regarding new programs. The funds are often not applied for at all. For example, Illinois' DePage Area Vocational Education Authority has the most extensive new program thrust among the LEAs examined in other states, but it has never considered VEA new program funds when deciding to go ahead with a program.

In California, SDE defines programs for new and emerging occupations as "programs new to the district and designed to meet new and emerging manpower needs and job opportunities." Although there is a negligible factor for new programs in nine of the ten SDE allocation formulas, funding for these programs is provided through a Subpart 2 setaside funding pool which amounted to $425,000 in 1981-82. The process of selecting recipients of these funds involves two stages: 1) a "Letter of Intent" to apply for funding; and 2) the selection of eligible recipients to submit a "Supplemental Application." Letters of intent were received from 155 districts requesting a funding total of $3,214,710 in 1981-82; 13 new programs were funded at a total of $436,570, or approximately two percent of Subpart 2 monies.

The definition used by the Chancellor's Office of the California Community Colleges is slightly different from SDE's, as a new program can be "new to the college" rather than the district. Like the secondary system, the community colleges also have a negligible new programs factor in nine of their ten allocation formulas, but support for such activities is essentially provided through a funding pool. In 1981-82, this funding pool was composed of .5 percent of the total VEA appropriation to the community colleges. Forty-one districts applied for these funds, which could be requested for singular or multiple Subpart support, and $132,000 was allocated among all 41 applicants on the basis of the regular allocation formulas used for each of the Subparts.

Additional information regarding programs for new and emerging occupations was obtained through the interviews with LEA staff and the mail survey. The findings are summarized below:

1. There is very little consensus regarding what California's definition of programs for new and emerging occupations should be, but most people agreed that it should include occupations which have been either newly created or significantly changed, and should be new at the district level.

2. Sixty-one percent of the secondary districts reported having begun no new programs in the last three years, and in those instances where new programs had been implemented, they were usually offered through an ROC/P.

3. All of the community college respondents reported having begun at least one new program in the last three years.

4. Almost all interviewees and survey respondents felt that it takes about three years for a new program to approach normal expenditure levels. However, cost data on programs for new and emerging occupations are virtually non-existent throughout the state, making it impossible to determine the accuracy of opinions regarding cost patterns for these programs.

5. Factors that facilitated the development of programs at both levels for new and emerging occupations were labor market need, the cooperation of business and industry, student desire and ROC/P cooperation.

6. Obstacles to beginning programs were lack of finances (mentioned by 97%) and a lack of qualified teachers (48%). Representatives of the community colleges also mentioned their new program approval process as an obstacle.

7. Ninety-six percent felt that there should be some sort of incentive for beginning programs for new and emerging occupations. The primary incentive, mentioned by 73 percent, was money.

8. Sixy-one percent thought VEA funds should be used to encourage programs for new and emerging occupations, without reducing the Basic Grant allocations.

Based on the needs identified during the study, it is recommended that California consider adopting the following definition:

A program for new and emerging occupations is one which is new to a school within a district and is designed to meet current and/or anticipated manpower needs and enhance employment opportunities for occupations which have recently come into existence or entered the labor market area served by the district, or for those occupations which have significantly changed in content, skills or delivery so that a new program is required to ensure optimal student preparation for employment in the occupation for which they are being trained.

This definition creates three classifications of programs for new and emerging occupations: 1) those which serve an entirely new occupation; 2) those which serve an occupation which has entered the labor market area; and 3) those which serve an occupation which has experienced significant change. The latter two classifications are likely to be the most prevalent since there are very few occupations which could be categorized as entirely "new." Rather, most grow out of and build upon existing occupations and skill areas.

Based on the study findings, additional recommendations pertaining to programs for new and emerging occupations were:

1. The State Department of Education should change the name of the first-stage procedure from "Letter of Intent" to "Preliminary Application" to more adequately reflect and communicate the process during this stage.

2. The State Department of Education should ask LEAs to prepare a need statement in addition to the brief description of the proposed program asked for in the Preliminary Application.

3. ROC/Ps should continue to be ineligible to receive new program funds.

4. The Chancellor's Office of the California Community Colleges should implement a more extensive application and review process for new program funds.

5. Both the State Department of Education and the Chancellor's Office should consider a multi-year funding period for new programs.

6. Both the State Department of Education and the Chancellor's Office should consider teacher salaries/benefits for inclusion as an appropriate expenditure of new program funds.

7. Both the State Department of Education and the Chancellor's Office should conduct a thorough review of the impact of and outcomes from their current new programs funding activities when the funding period is over.

8. Both the State Department of Education and the Chancellor's Office should increase their efforts to assure that the LEAs maintain well-documented program information and cost data on new programs, while at the same time simplifying procedures and keeping them to a minimum.

9. A list of those occupational areas with the greatest new program needs should be jointly compiled by representatives of the State Department of Education, the Chancellor's Office of the California Community Colleges and the Employment Development Department.

HIGH COST TECHNICAL PROGRAMS REPORT

The purpose of the study of high cost technical type (HCT) vocational programs was to analyze the desirability and possible methods for encouraging the implementation of HCT programs. No formal definition exists within the California vocational education system for HCT programs, but state level administrators indicated that the term reflects the concerns of vocational educators relative to meeting the new technical training needs of industry. According to these individuals, industry is demanding employees with highly technical and specialized skills, and providing vocational training to meet these labor market demands requires implementing programs which require costly equipment, supplies, facilities and/or instructional personnel.

Three of the eight study states have developed categorizations of vocational programs which consider some measure of program cost and/or program level. Ohio and Florida use the term "technical" to characterize vocational programs offered at the postsecondary level which lead to an associate degree. Although Illinois does not use the term technical in its classification scheme for vocational programs, the majority of Level 1 programs, which are the highest level programs in the categorization scheme based on course content and emphasis, are found at the postsecondary level. The practices of other states suggests that the "technical" component of HCT programs would require restricting the definition of these programs to postsecondary vocational programs leading to a degree or certificate.

Since detailed program level cost data are not available within California, program cost data from four other states were analyzed: Colorado, Kansas, Oklahoma and Florida. Volume II contains the listing of the high cost programs identified through the analyses of cost data from these states. Only two programs listed fall into the area of Technical Education under the USOE classification system, and these are both secondary level vocational programs. All of the high cost programs at the postsecondary level fall into the program area of Health Occupations.

From the interviews with and survey of vocational administrators at the state and local level, in and outside of California, the following findings emerged:

1. Adequate program level cost data are not available to generate a documented listing of the high cost vocational programs within California.

2. General agreement exists as to what the high cost programs are at both the secondary and postsecondary level. No standard definition of a technical program exists, however, and the criteria which have been used in identifying such programs involve highly subjective evaluations.

3. Federal vocational education funds have played a minor role in the implementation of high cost vocational programs identified by study participants.

4. The majority of vocational administrators do not favor the creation of VEA incentives for the implementation of HCT programs. The strongest opposition to this concept is found at the secondary level.

Based on the study findings, the following recommendations are made regarding HCT programs:

1. Incentives to encourage the implementation of HCT programs should not be created at this time.

2. The State Department of Education and the Chancellor's Office should develop a program cost data base for vocational programs at the secondary and postsecondary levels within the state.

3. The State Department of Education and the Chancellor's Office should move toward the development of a vocational education funds distribution system which considers program costs in the distribution procedures.

4. If at a future time incentives to provide special support to initiate or maintain high cost technical programs are considered, student placement rates, either actual or anticipated, must be a key criterion in evaluating which programs are to receive support.

5. The State Department of Education and the Chancellor's Office should encourage local districts to cooperate with industry in the development of high cost vocational programs.